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APPLICANT : SHIN KOBE ELECTRIC MACH CO LTD;

INVENTOR : FUJITA MASARU;

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TITLE : MANUFACTURE OF NEGATIVE ELECTRODE FOR SECONDARY BATTERY

ABSTRACT : PURPOSE: To form an electrode having high strength and substantially large specific surface area to obtain a battery having high current density by bonding aluminium-low melting point metal alloy with thermoplastic polymer.

CONSTITUTION: Aluminium-low melting point metal alloy, carbon powder, and carbon fiber are mixed with polymer powder. The mixture is bonded on an electrode substrate such as expanded metal by thermal press molding to form an electrode. In this process, the temperature lower than the softening point of the polymer is preferable, and the pressure similar to the compression molding pressure of the polymer is preferable. Since the aluminium-low melting point alloy easily forms an oxide film, the treatment in an inert gas atmosphere or in a vacuum is required. A negative electrode which is lightweight and has large specific surface area and good molding and working capability can be obtained as the negative electrode for a secondary battery in which lithium ions are taken in and out.

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